

Claims

- [c1] An apparatus for use in a well having at least three zones, comprising:
at least three sand control assemblies for positioning proximal respective zones;
a flow assembly defining at least three flow conduits to respectively communicate with the at least three zones, wherein each of at least two of the flow conduits includes an annular path; and
at least three flow control devices to respectively control flow of the at least three flow conduits.
- [c2] The apparatus of claim 1, wherein the flow assembly includes a first tube having an inner bore, a first one of the flow conduits including the inner bore of the first tube.
- [c3] The apparatus of claim 2, wherein the flow assembly further includes a second tube having a diameter larger than that of the first tube,
wherein a first annular path is defined between the first and second tubes, a second one of the flow conduits including the first annular path.
- [c4] The apparatus of claim 3, wherein the flow assembly fur-

ther includes a third tube having a diameter larger than that of the second tube,
wherein a second annular path is defined between the second and third tubes, a third one of the flow conduits including the third annular path.

[c5] The apparatus of claim 4, wherein a first one of the flow control devices includes a ball valve, the ball valve to control fluid communication between the first flow conduit and a flow path.

[c6] The apparatus of claim 5, wherein a second one of the flow control device includes a first sleeve valve, the first sleeve valve to control fluid communication between the second flow conduit and the flow path.

[c7] The apparatus of claim 6, wherein a third one of the flow control devices includes a second sleeve valve, the second sleeve valve to control fluid communication between the third flow conduit and the flow path.

[c8] The apparatus of claim 1, wherein the sand control assembly each includes at least one sand screen.

[c9] A system for use in a well having at least three zones, comprising:
a production tubing; and
at least three sand control assemblies for positioning

proximal respective zones;

a flow assembly having at least three flow conduits to respectively communicate with the at least three zones, the flow assembly having a first tube, wherein a first one of the flow conduits includes an inner bore of the first tube, a second one of the flow conduits includes an annular path around the first tube, and a third one of the flow conduits includes a second annular path around the first annular path; and

at least three flow control devices to respectively control flow between the at least three flow conduits and the production tubing.

[c10] The system of claim 9, wherein the flow assembly includes a second tube, the first and second tubes defining the first annular path.

[c11] The system of claim 10, wherein the flow assembly further includes a third tube, the second and third tubes defining the second annular path.

[c12] The system of claim 11, wherein the first tube has a first diameter, the second tube has a second diameter greater than the first diameter, and the third tube has a third diameter greater than the second diameter.

[c13] The system of claim 12, wherein at least portions of the

first, second, and third tubes have a common axis.

- [c14] The system of claim 9, wherein the flow control device to control flow between the first flow conduit and the production tubing comprises a ball valve.
- [c15] The system of claim 14, wherein the flow control device to control flow between the second flow conduit and the production tubing comprises a first sleeve valve.
- [c16] The system of claim 15, wherein the flow control device to control flow between the third flow conduit and the production tubing comprises a second sleeve valve.
- [c17] The system of claim 16, wherein the third flow conduit further comprises a well annular region, the second sleeve valve to control fluid communication between the well annular region and the production tubing.
- [c18] The system of claim 9, wherein the flow control devices are remotely actuatable.
- [c19] The system of claim 18, wherein the flow control devices are actuatable by at least one of electrical signals, fiber optic signals, and hydraulic pressure.
- [c20] A method of controlling fluid flow in a well having at least three zones, comprising:
providing a flow assembly having at least three conduits

to communicate with the at least three zones, wherein a second one of the conduits comprises a first annular path around a first one of the conduits, and a third one of the conduits comprises a second annular path around the first annular path;

positioning sand control equipment proximal the at least three zones; and

remotely controlling flow control devices to control fluid flow through the at least three flow conduits.

[c21] The method of claim 20, wherein providing the flow assembly comprises providing first, second, and third tubes, the first conduit comprising an inner bore of the first tube, the first annular path defined between the first tube and the second tube, and the second annular path defined between the second tube and the third tube.

[c22] The method of claim 20, wherein remotely controlling the flow control devices comprises remotely controlling with at least one of electrical signals, fiber optic signals, and hydraulic pressure.